

identifying a lexical container from among a plurality of lexical containers based on a length of the key; and

storing the string in an entry in the lexical container based on the key.

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33. (New) The method of claim 1, wherein:

a first lexical container of the lexical containers is associated with a first key length;

a second lexical container of the lexical containers is associated with a second key length;

the first key length is less than the second key length; and

the first lexical container is configured to hold more entries than the second lexical container.

34. (New) The method of claim 31, wherein:

a first lexical container of the lexical containers is associated with a first key length;

a second lexical container of the lexical containers is associated with a second key length;

the first key length is less than the second key length; and

the first lexical container is configured to hold more entries than the second lexical container.

REMARKS

By this amendment, claims 1-34 are pending, in which claims 1 and 16 are amended, and claims 31-34 are newly presented. As adequate descriptive support is found throughout the specification including p. 3, FIG. 3, and accompanying text, no new matter is introduced.

The Office Action mailed June 5, 2001 rejected claims 1-4 and 16-19 under 35 U.S.C. § 102 as anticipated by *Li et al.* (US 5,774,588),¹ claims 5 and 20 as obvious under 35 U.S.C. §

¹ There are conflicting statements in the Office Action as to the basis of the rejection of claims 1-4 and 16-20. Although the summary of the rejection states that claims 1-4 and 16-20 were rejected over *Levine et al.* (US 6,073,129), the discussion of the merits of the rejection and citations referred to *Li et al.* instead. Because of the Office Action's detailed treatment of *Li et al.*, this Response addresses the rejection over *Li et al.*

103 based on *Li et al.* in view of *Levine et al.* (US 6,073,129) and claims 6-15 and 21-30 as obvious over *Li et al.* The rejection is respectfully traversed because *Li et al.*, alone or in combination with *Levine et al.*, fails to disclose, teach, or otherwise suggest the limitations of the claims.

For example, the claims require either “identifying a lexical container from among a plurality of lexical containers based on a length of a key” (independent claims 1, 16, and 31-32 and hence all the dependent claims) or “identifying a hash table from among a plurality of hash tables based on a length of the key” (independent claims 15 and 29). As recited, the key is used either to search for the string in the lexical container or hash table (e.g. “searching the lexical container for an entry associated with the string based on the key” in claims 1 and 16, as amended) or to store the string in the lexical container (“storing the string in an entry in the lexical container based on the key” in claims 31-32).

Provision of lexical containers or hash tables that are identified based on the length of the key advantageously makes possible each to be individually tuned (specification, p. 3). For example, as recited in dependent claims 33-34, a lexical container associated with a shorter key can be configured to hold more entries than a lexical container associated with a longer key. This feature, however, is not disclosed in *Li et al.*

Li et al. is directed to a method for comparing strings with entries of a lexicon with a fixed-length key. At step 120 of FIG. 1B, an incoming, unverified string 20 is processed to produce a fixed-length signature vector (col. 8:57-65), which is used as a key to search for entries in *Li et al.* data structures (col. 8:66-9:35). More specifically, the string is first converted into a bi-gram vector 22 of FIG. 4A (step 205 of FIG. 2; col. 6:51-52). The bi-gram vector 22 is a bit vector having a fixed length of $26 \times 26 = 676$ bits, with its elements being “1’s and 0’s corresponding to whether each possible bi-gram of the English alphabet occurs in the string”

(col. 6:53-55). At step 210, the bi-gram vector 22 is then folded into a signature vector 25 having a fixed length of 85 bits (col. 6:59-67). This signature vector 25 is used to store and retrieve entries from the lexicon.

By contrast, *Li et al.* does not disclose a method in which a lexical container or hash table from among a plurality of lexicon based on “a length of the key” as recited in the claims. The signature vector 25 key is fixed length at 85 bits, and there thus is no need nor motivation in *Li et al.* to use that key’s constant length to identify a particular lexical container or hash table.

The portions of *Li et al.* cited in Office Action do not support the rejection. For the example, the Office Action contends that the identifying limitation can be read on “where, find a small subset of the lexicon which shares characteristics with the unverified string” at col.8:53–9:17. However, *Li et al.*’s does not disclose that its “characteristics” on col. 8:54 includes the length of key, but indicates rather that the characteristics include “some common feature with the unverified string in the sense that the bit pattern of at least one group in the candidate’s signature vector is the same as that of a group of the unverified string’s signature vector.” (col. 9:11-15). In other words, the shared characteristics are shared bi-grams. Accordingly, col. 8:53–9:17 does not disclose, teach, or otherwise suggest “identifying a lexical container ... based on a length of a key.”

Dependent claims 2-14, 17-20, and 33-34 are allowable for at least the same reason as their independent claims and are also separately patentable over the applied art on their own merits. For example, claims 10 and 25 recite “moving a relative position of the entry for the string within the sequence of slots toward the beginning of the sequence of slots” but this limitation is not found in either *Li et al.* or *Levine et al.* The Office Action’s analysis of this limitation in claims 10 and 25 referred back to the analysis of claim 6. However, the analysis of

claim 6 did not address the "moving a relative position" limitation, and for good reason because claim 6 does not recite the "moving a relative position" limitation.

Therefore, the present application, as amended, overcomes the objections and rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at 703-425-8516 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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